A. Cover Sheet

1. ☐ agricultural project ☐ individual project
   ☒ urban project ☒ joint application

2. Proposal title – concise but descriptive: **Joint Agency X-Ray Processor Retrofit Model Project.**

3. Principal applicant – organization or affiliation: **Irvine Ranch Water District (in conjunction with East Bay Municipal Utility District and Upper San Gabriel Valley Municipal Water District).**

4. Contact – name, title: **Dale Lessick, Conservation Coordinator**

5. Mailing address: **15600 Sand Canyon Avenue, Irvine CA 92618**

6. Telephone: **(949) 453-5325**

7. Fax: **(949) 453-5354**

8. E-mail: **lessick@irwd.com**

9. Funds requested- dollar amount: $**13,698**

10. Applicant cost share funds pledged – dollar amount: $**28,000**

11. Duration – (month/year to month/year): **July 2001** to **June 2002**

12. State Assembly and Senate districts and Congressional district(s) where the project is to be conducted: **Assembly Districts: 11, 14, 15, 16, 18, 44, 49, 57, 58, 59, 60, 70, 71**
    Senate Districts: 7, 9, 10, 21, 24, 29, 30, 33, 35
    Congressional Districts: 7, 9, 10, 13, 16, 27, 28, 31, 34, 39, 41, 47

13. Location and geographic boundaries of the project: **Within the service areas of the participating agencies, covering Alemeda and Contra Costa Counties, the cities of Baldwin Park, El Monte, South El Monte, West Covina, San Gabriel, Rosemead, Temple City, Arcadia, South Pasadena, La Puente, Duarte, Irvine, Lake Forest, and parts of surrounding areas.** ***See Attachment 1: Maps of Service Areas.***

14. Name and signature of official representing applicant. By signing below, the applicant declares the following:
    —the truthfulness of all representations in the proposal;
    — the individual signing the form is authorized to submit the application on behalf of the applicant;
    — the applicant will comply with contract terms and conditions in Section 11 of the PSP.

_____ _____
(printed name of applicant) *(date)*

_____
(signature of applicant)

B. Scope of Work

RELEVANCE AND IMPORTANCE

1. Executive Summary.
   Hospitals commonly have several medical x-ray processors operating 24 hours per day, 365 days per year. Published water flow rates for the 35 units on the market range from .2 to 2.5 gallons per minute (gpm) or 105,120 to 1,314,000 gallons per year (gpy). Units operating at 2.5 gpm are very common while units operating at .2 gpm are rare.

   A new technology is available that, when installed on x-ray processors, recirculates the water thereby reducing consumption to approximately 35,000 gpy. This model project will test the equipment by retrofitting seven (7) existing x-ray processors with this technology and then measuring the difference using meters specifically placed to measure processor flows. The meters will be placed on the existing equipment for one month prior to the upgrade installation and remain in place for one month after the new equipment is operational.

   Manufacturer claims of significant water savings have been initially substantiated through a small retrofit project taken on by the Los Angeles Department of Water and Power. The proposed model project will measure actual meter flows to confirm real water savings and clarify the water savings capabilities of this technology.

2. Statement of Issues.
   As urban agencies and signatories to the California Urban Water Conservation Council's Memorandum of Understanding, there is a commitment to implementing the urban "Best Management Practices" in an effort to do our part to reduce the negative impact on the Bay-Delta. This project directly relates to BMP #9 directing reduction in Commercial, Industrial and Institutional end uses.

3. Nature, Scope and Objectives.
   The results of this project will be the basis for calculating the cost-effectiveness of encouraging end-users to adopt this technology. "Encouragement" may range from providing information about the technology to offering financial incentives (such as rebates). The decision of which encouragement approach to pursue, if any, will depend on the volume of expected water savings.

TECHNICAL/SCIENTIFIC MERIT, FEASIBILITY, MONITORING, AND ASSESSMENT

4. Methods, procedures and facilities.
   Film processors must rinse processing chemicals from the film prior to the dryer section of the machine. In most machines, the rinse section of the processor receives a constant supply of running water, up to 2.5 gpm.

   The Water Saver/Plus is a water-recycling device that is used in conjunction with x-ray film processors. The Water Saver/Plus holds 15 gallons of water and circulates the water through the rinse section of the processor. A timer releases a set amount of fresh water, up to 4 gallons per hour, into the unit for proper temperature control.

No operational changes are necessary to use this technology. *There is no additional chemical impact to the environment to operate this equipment*. The maintenance of the unit requires a cleaning every 1 to 2 weeks depending on local algae conditions. The unit is drained, rinsed, scrubbed, rinsed again and household bleach is added as an algaecide. Cleaning cost is approximately $35.00, born by the end-user. The device stands 26" high with a 15" x 15" footprint and uses up to 110 volts.

5. Schedule.

TIME	TASK	BUDGET ITEM	AMOUNT
July 2001	Execute final contract	10 hours, agency time	$300
July – Sept. 2001	Finalize arrangements with hospitals	110 hours, agency time	$3,300
Sept. 2001	1st Quarter Report	14 hours, agency time	$420
Oct. - Nov. 2001	Meter existing x-ray processor equipment (1 month for each of the 7 sites)	(all vendor costs and equipment in one sum)	$31,798
Nov. - Dec. 2001	Retrofit x-ray processor equipment Meter new x-ray processor equipment (1 month for each of the 7 sites)		
Dec. 2001	All data submitted to agency	(vendor time)	
Dec. 2001	2nd Quarter Report	14 hours, agency time	$420
Jan. – Feb. 2002	Analyze data Customer satisfaction follow-up calls	70 hours, agency time	$2,100
March 2002	3rd Quarter Report	70 hours, agency time	$2,100
April - June 2002	Submit results for publication Presentations (if any requested)	28 hours, agency time	$840
June 2002	4th (and Final) Quarter Report	14 hours, agency time	$420
Total			**$41,698**

6. Monitoring and assessment.
   A water meter (a Neptune T-10, brass, 5/8") will be affixed to the existing intake line for period of at least one month prior to the installing the new equipment and remain on the line for at least one month after the recirculating unit is installed. The meter will be read at least once weekly during the monitoring period.

C. Outreach, Community Involvement, and Information Transfer

1. Disadvantaged communities.
   Both EBMUD and USGVMWD serve substantial portions of disadvantaged communities. Every effort will be made to seek participation from hospitals or medical facilities located in and serving these communities.

2. Training, employment, and capacity building potential.
   Not applicable.

3. Disseminating information.
   Results of the assessment will be submitted to conservation-related organizations (such as AWWA's tri-annual conference and The California Department of Water

Resource's *Water Conservation News*) for publication. Results will also be reported to the CUWCC and disseminated among its members. If the results are impressive, it would be in the vendor's interest to disseminate the information to prospective customers. If cost-effective, water agencies may choose to implement programs to reach their own customers.

4. Letters to government entities.
   Not applicable. All participants are water agencies.

D. Qualifications of the Applicants, Cooperators, and Establishment of Partnerships

1. Resumes.
   Resumes for the agency project managers are inserted at the end of this proposal:
   Dale Lessick, Irvine Ranch Water District;
   Elena Layugan, Upper San Gabriel Valley Municipal Water District;
   Leann Gustafson, East Bay Municipal Utility District

   Agency project managers will be responsible for gaining participation from end-users, coordinating metering and installation process, analyzing the data, completing the reports and disseminating the results to the water industry.

2. External cooperators.
   Mike Ferrara is the General Manager for C&A X-Ray, which is the sole vendor of this technology. C&A X-Ray will be responsible for installing the equipment, placing and removing (as well as monitoring) the meters, and submitting the data to the agencies for analysis.

   Five hospitals will participate in the capacity of being the end-users of the technology.

3. Partnerships.
   Irvine Ranch Water District, Upper San Gabriel Valley Municipal Water District and East Bay Municipal Utility District are jointly submitting this proposal. The participating agencies are situated in different regions of the state: Orange County, LA County and Alameda County. This partnership of Southern California agencies with a Northern California agency will provide a statewide approach that will augment efforts to disseminate project results and draw further interest in such water saving technologies across the state.

E. Costs and Benefits

1. Budget summary and breakdown.

ITEM	DETAIL	AMOUNT
Salaries:	330 hours @ $25.00/hour	$8,250
Benefits:	@ 20% over salaries	$1650
Equipment:	5 Water Saver/Plus and pumps @ $3894 + est 10% tax	$29,984
Shipping & Travel	3 trips to Oakland for monitoring and installation	$1,814
Total		**$41,698**

Irvine Ranch Water District and East Bay Municipal Utility District will each contribute $4000 and Upper San Gabriel Valley Municipal Water District will contribute $12,000 to cover the cost of their own salaried positions, benefits and portions of the equipment expense.

Joint agency contribution: $28,000

CALFED contribution: $13,698

2. Budget justification.
   The salaried hours are broken out under section B.6 Schedule.
   Equipment is described under section B.4 Methods, procedures and facilities.
   Travel is included in this proposal because the manufacturer currently operates only in the greater Los Angeles area. The first trip to Oakland will be to install the meters for pre-installation monitoring. The second trip will be to install the equipment. The third trip will be to remove the metering devices.

3. Benefit summary and breakdown.
   All benefits are calculated in Attachment 1 in terms of reduced potable water demand and sewer flows. Reduced water and sewer flows also result in reduced need for power (for pumping and treating water). However, since the exact reduction in kilowatts is not known, those benefits are not calculated in the Attachment.

4. Assessment of costs and benefits.
   See Attachment 2.

F. Matching Funds Commitment Letter

A. Irvine Ranch Water District

B. Upper San Gabriel Valley Municipal Water District

C. East Bay Municipal Water District

Letters will be submitted when this proposal is selected for funding, along with other documents required at that time.

DALE A. LESSICK

Education

University of California Irvine, MBA, 1994

University of California Los Angeles, BAs, Psychology and Philosophy, 1985

Experience

CTSI Corporation, 1994-to date

Senior Project Manager

- Currently directing the Water Efficiency Program for Irvine Ranch Water District. Filling all responsibilities typical to a Conservation Coordinator, such as program design and implementation for all BMPs, cost-effectiveness calculations, creating materials and disseminating public information, serving on various conservation-related committees at the state and local levels, and serving as the main information source for agency staff and directors on water conservation legislative issues. Explore new technologies showing promise for greater efficiency, especially for commercial, industrial and institutional sites.
- Designed for client residential survey conservation program, including the financial feasibility of the entire project. Responsible for all aspects of the program, including the recruitment and training of the surveyors and support staff, inventory, customer service, databases, reports, and monitored and improved individual surveyors' productivity. Served as the program integrator between the 20+ surveyors in the field, the 10+ CBO staff, the out-of-state subcontractor, and the 30+ water agency representatives.
- Supervised Community-Based Organizations operating ULF Toilet distribution programs. Responsible for marketing outreach campaigns; inventory control; database management; training on program operations, policies and procedures; and safety compliance for the Metropolitan Water District of Southern California and San Diego County. Ensured CBOs complied with program regulations, maintained accuracy in record-keeping, and followed up on customer service issues. Motivated CBOs to meet project goals. Supervised the San Diego County CBOs on successfully implementing several special events for the County's subagencies.
- Acted as project manager in the largest single- and multi-family retrofit program in the US. Served as the project head for the only ULF Toilet distribution location under direct CTSI control, resulting in the only location to realize100% accuracy in all its record-keeping, as well as to achieve the highest level of productivity (the greatest number of customers reached and fixtures installed) per employee. Implemented a variety of management experiments which proved successful and which have been incorporated into other projects to improve overall performance. Created direct promotional and communication materials required for the program.
- Co-creator of the CTSI multi-family water conservation training program, which resulted in 90% of the participants implementing recommendations from the program. Created and wrote the accompanying training manual which details the training and includes such information as how to read the meter, calculating savings on plumbing retrofits, leak detection, resident motivation, and information specific to the participating water agency.

Elena M. Layugan

EDUCATION

University of Southern California, Los Angeles, Masters of Public Administration, 1991

University of Southern California – Los Angeles, Masters of Planning, 1990

Loyola Marymount University, Los Angeles BA, Urban Studies, 1988

Kansai Gaidai University - Hirakata, Japan, Study Abroad - Fall Semester, 1986

WORK EXPERIENCE

Upper San Gabriel Valley Municipal Water District - *El Monte, CA*

Conservation Coordinator *September, 1992 to Present*

- Develop, implement, manage and evaluate district-wide conservation and education programs. Model, justify and administer fiscal budget for conservation and education programs.
- Engage in committees that actively formulate, research and determine feasible technologies, methodologies, standards and practices in relation to water efficiency.
- Formulate conservation policies and programs and provide recommendations to General Manager and Board of Directors. Provide input and guidance for conservation policies and legislation at federal, state and local levels.
- Interact directly with elected officials, general manager, public agencies, utilities, private businesses, non-profit organizations and the general public.
- Function as voting representative on the California Urban Water Conservation Council.
- Write and administer legal agreements and grant proposals. Author, present and publish findings and articles regarding conservation programs and approaches.
- Supervise and direct staff, consultants and vendors in administering various programs and events. Coordinate and oversee volunteer events with as many as several hundred participants of all ages.
- Conduct presentations and workshops for diverse audiences. Respond to public concerns regarding water quality, reclamation and conservation questions and issues and create diverse informational materials and programs for public outreach efforts
- Designed and maintain agency's initial Internet website.

Los Angeles Department of Water and Power - *Los Angeles, CA*

Consultant - Suggestion Plan Office and Employees' Association *1991 – 1992*

Administrative Intern - Employees' Association *1990 - 1991*

- Conduct presentations and workshops for diverse audiences.
- Processed employee suggestions: summarized suggestions/evaluations, input data, tabulated awards, and developed promotional strategies.
- Assisted with developing fiscal budget requests and justifications.
- Implemented data reorganization and spatial reassessment projects.

Researched and compiled historical data concerning the Association.

Leann Gustafson

EDUCATION

University of San Francisco, BS, Information Systems Management, 2000

Professional History

EBMUD, Water Conservation Representative, 2000-to date

Gustafson Design & Construction, Owner, 1990-to date

Experience

Water Conservation Representative, EBMUD

- Design and implement CII water efficiency programs. Currently responsible for water efficiency surveys and incentive programs within the institutional end use category. Responsible for financial monitoring and reporting, coordinating services with consultants, drafting contracts, marketing and public outreach, and engineering reviews of proposed technological implementations.
- Serve on Unaccounted for Water internal committee. Responsible for coordinating internal audits and reporting functions of District facilities. Formulate internal review processes. Perform detailed data and system analysis.
- Responsible for data collection and database maintenance for institutional clients. Develop and implement Geographical Information System (GIS) applications for spatial data analysis of water conservation strategies.
- Structure community presentations and training workshops to advance public awareness of water conservation practices and agency support.

Owner, Gustafson Design and Construction

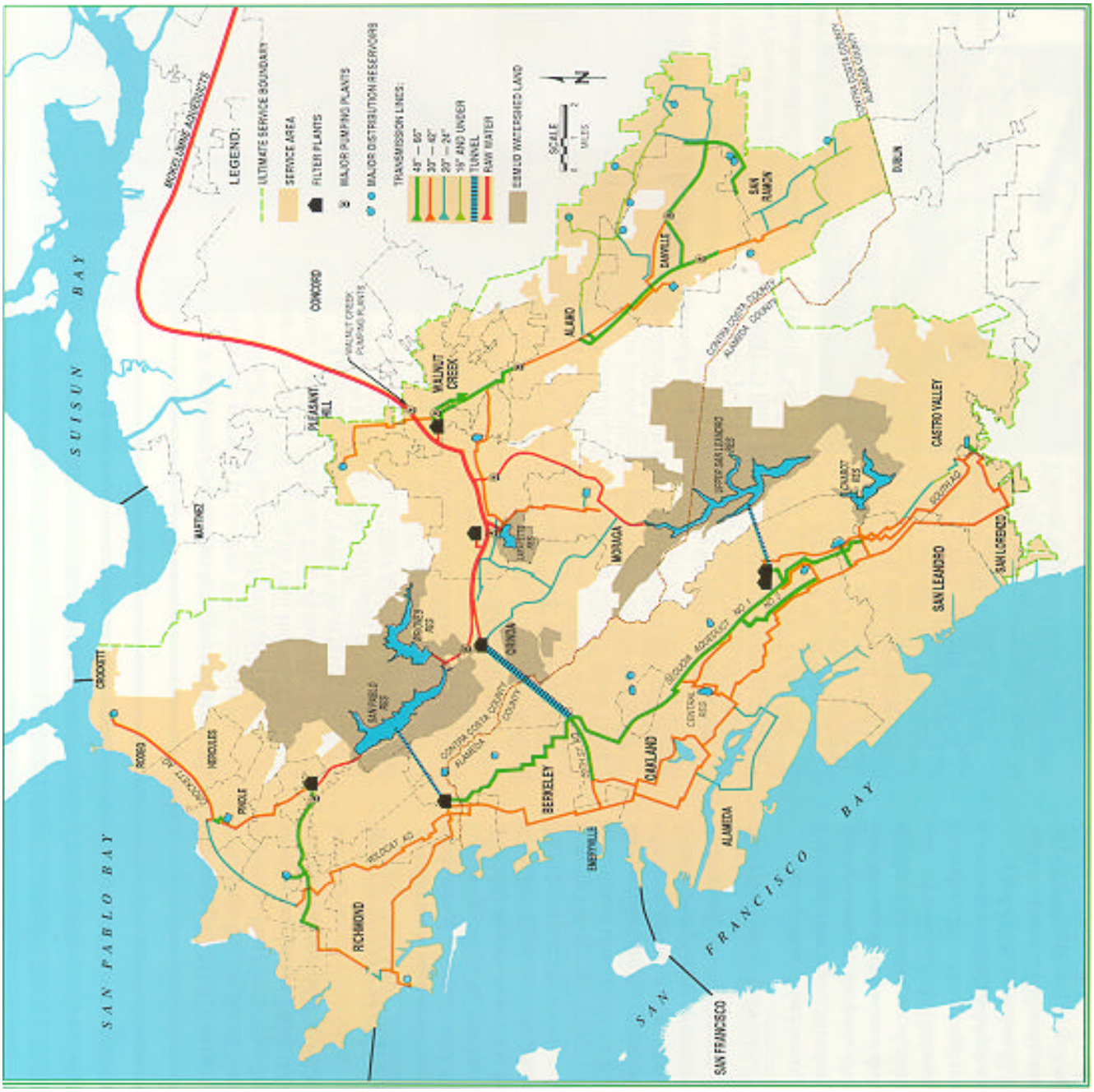
- Operate general contracting firm, California license # 593-969.
- Supervise construction of various light commercial and residential projects in the Greater Bay Area. Responsible for design, construction and financing. Supervise subcontractors, staff, and customer contact. Full knowledge of all applicable codes and regulatory compliance issues.

Attachment 2: Maps of Geographic boundaries of the Project

IRVINE RANCH WATER DISTRICT'S SERVICE AREA

IRWD's service area is represented by the black outline on the map, plus the City of Lake Forest which merged with IRWD on January 1, 2001.

EAST BAY MUD'S SERVICE AREA



UPPER SAN GABRIEL VALLEY MWD SERVICE AREA